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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/702,160	10/30/2000	Thomas C. Harrop	50671-P012US-10004457	1336

29053 7590 02/03/2004		EXAMINER
DALLAS OFFICE OF FULBRIGHT & JAWORSKI L.L.P. 2200 ROSS AVENUE SUITE 2800 DALLAS, TX 75201-2784		MAURO JR, THOMAS J

ART UNIT	PAPER NUMBER
2143	6

DATE MAILED: 02/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

   A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM
   THE MAILING DATE OF THIS COMMUNICATION.
   - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
     after SIX (6) MONTHS from the mailing date of this communication.
   - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
   - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
   - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
   - Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
     earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 October 2000*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-58* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-58* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 October 2000* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
         application from the International Bureau (PCT Rule 17.2(a)).
   * See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application)
   since a specific reference was included in the first sentence of the specification or in an Application Data Sheet.
   37 CFR 1.78.
   a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific
   reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)	4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) ☐ Notice of Informal Patent Application (PTO-152)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *2 & 4* .	6) ☐ Other: .

DETAILED ACTION

1.   Claims 1-58 are pending and are presented for examination. A formal action on the

merits of claims 1-58 follows.

Drawings

2.   The drawings are objected to because Figure 2 item 120 is labeled "NMS", which does

not conform with the label given for that item in the specification, which is "MS." Please correct

Figure 2 by changing label to -- MS --. A proposed drawing correction or corrected drawings are

required in reply to the Office action to avoid abandonment of the application. The objection to

the drawings will not be held in abeyance.

Claim Objections

3.   Claim 21 is objected to because of the following informalities: TCP/IP is misspelled.

Please correct the spelling from "TPC/IP" to -- TCP/IP --. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5.   Claims 1-8 and 10-14 are rejected under 35 U.S.C. 102(e) as being anticipated by

Ballantine et al. (U.S. 6,446,123).

With respect to claim 1, Ballantine teaches a method for managing a network comprising

the steps of:

providing at least one rule that defines a condition for predicting a performance problem

within the network **[Ballantine -- Col. 2 lines 57-64, Col. 5 lines 5-19 and Col. 7 lines 2-5 –**

Software reads general information entered into the system by the user and uses historical

data to produce policies or facts, i.e. rules, such as when a certain level is approaching a

predetermined threshold value];

gathering status information about the network **[Ballantine -- Col. 4 lines 47-53 –**

Sensors gather data, i.e. polling, across the network];

executing the at least one rule for the gathered status information **[Ballantine -- Col. 6**

lines 5-11 – Information, gathered from planning, network management and maintenance

scheduling tools are constantly used in monitoring, i.e. executed, to predict system health];

and

based on said executing the at least one rule, predicting whether a future performance

problem is likely within the network **[Ballantine -- Col. 6 lines 5-11 and lines 35-38 – System**

predicts future component performance and when problems are likely to occur].

With respect to claim 2, Ballantine further teaches determining an appropriate action for preventing said performance problem from occurring [**Ballantine -- Col. 6 lines 5-11 and Col. 7 lines 51-60 -- System determines solution and appropriate actions needed to be taken to prevent future predicted problem**].

With respect to claim 3, Ballantine further teaches wherein said determining step includes determining said appropriate action from the at least one rule [**Ballantine -- Col. 7 lines 40-60 -- System is fully integrated such that the rules are used in conjunction with the monitoring system to predict problems and when they are likely to occur. Solutions or appropriate actions are then determined based upon the rule being compared, i.e. a given threshold, etc, and the current state of the system**].

With respect to claim 4, Ballantine further teaches initiating said appropriate action before said performance problem occurs in an attempt to prevent said performance problem [**Ballantine -- Col. 7 lines 55-60 -- After recommending appropriate action, system initiates the action by either scheduling maintenance, ordering a necessary part or contacting a maintenance technician or maintenance administrator, etc...**].

With respect to claim 5, Ballantine further teaches wherein said executing step further includes correlating the gathered status information with the at least one rule [**Ballantine -- Col.**

9 lines 1-14 – System predicts future problems by comparing gathered status information

against the policies, i.e. rules, of the system, i.e. violation of an 80% load policy].

With respect to claim 6, Ballantine further teaches wherein the at least one rule defines a

known pattern for status information that foreshadows the occurrence of a performance problem

[Ballantine -- Col. 6 lines 24-34 – System "learns from experience" and can modify and

adapt policies according to past and current monitored status information, i.e. patterns,

such as Mother's Day produces a heavy call volume and which hours are the highest,

etc...].

With respect to claim 7, Ballantine further teaches wherein said performance problem is

any one or more of the problems selected from the group consisting of:

Operability problem of one or more network elements, operability problem of the

network, failure of one or more network elements, failure of the network, integrity problem of

one or more network elements, integrity problem of the network, efficiency problem of one or

more network elements, efficiency problem of the network, decreased processing speed of one or

more network elements, decreased processing speed of the network, usage capacity problem of

one or more network elements, and usage capacity problem of the network [Ballantine -- Col. 5

lines 55-56 and Col. 7 lines 47-51 – Various performance problems are monitored and

predicted by the network, including usage capacity problems of a network element, i.e.

switch and usage capacity of the entire network, i.e. on Mother's Day].

With respect to claim 8, Ballantine further teaches wherein said gathering step includes gathering status information for any one or more of the group consisting of:

network status, disk status, database status, memory status, CPU status, and operating system status **[Ballantine -- Col. 4 lines 46-57 – Sensors gather status information regarding the network]**.

With respect to claim 10, Ballantine further teaches wherein said providing at least one rule includes a user defining said at least one rule **[Ballantine -- Col. 5 lines 5-13 – User inputs information into the system, i.e. a policy or rule, which states that certain criteria or levels should always be maintained, i.e. upgrading system once it reaches 80% capacity]**.

With respect to claim 11, Ballantine further teaches wherein said at least one rule is implemented as software code executing on a management system **[Ballantine -- Col. 5 lines 5-7 – Health manager software, i.e. part of management system, executes and monitors rules and policies]**.

With respect to claim 12, Ballantine further teaches said at least one rule correlating disparate network elements **[Ballantine -- Col. 9 lines 32-37 – Based upon a given rule or policy, monitoring occurs at one or more different elements, i.e. switches, bay stations, routers, etc., and predicting of performance occurs at more than one element, all of which can be of any type in the system]**.

With respect to claim 13, Ballantine further teaches said at least one rule correlating

disparate characteristics of one or more network elements **[Ballantine -- Col. 9 lines 32-37 --**

Based upon a given rule or policy, monitoring occurs at one or more different elements, i.e.

routers, switches, bay stations, etc., and predicting of performance occurs at more than one

element, all of which can be of any type in the system. The system allows monitoring of any

network device and its characteristics, thereby requiring disparate characteristics to be

monitored].

With respect to claim 14, Ballantine further teaches wherein said disparate characteristics

include those selected from the group consisting of:

CPU run queue capacity, CPU run queue blocks, CPU run queue waits, context

switching, memory paging, swap allocations, disk writes, disk blocking, disk waiting, disk

utilization, network inbound packets, network outbound packets, network errors, and network

collisions **[Ballantine -- Col. 4 lines 54-57 -- Monitoring information includes outbound and**

inbound packets].

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

7.   Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ballantine et al.

(U.S. 6,446,123), as applied to claim 1 above, in view of Sime (U.S. 5,961,598).

        Regarding claim 9, Ballantine teaches the invention substantially as claimed including

gathering status information from various network elements **[Ballantine -- Col. 4 lines 47-53 –**

Sensors gather data, i.e. polling, across the network], as aforementioned in claim 1 above, but

fails to teach using distributed gateways to gather the status information.

Sime, however, teaches a system that uses a gateway to collect information about a particular

network **[Sime Col. 5 lines 62-67 – Internet gateways gather and collect information for**

central server system].

Ballantine is concerned with gathering information on network resources for a management

system, as is Sime.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention

was made to incorporate using gateways to gather and collect information, as taught by Sime into

the management system of Ballantine, in order to further collect data and resource information at

various network points to ensure best usage of resources, notifications of problems and more

efficient systems.

8.   Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ballantine et al.

(U.S. 6,446,123) in view of Sime (U.S. 5,961,598).

Regarding claim 15, Ballantine teaches the invention substantially as claimed, a system

for managing a network, said system comprising:

gathering status information for one or more network elements **[Ballantine -- Col. 4 lines**

47-53 – Sensors gather data, i.e. polling, across the network];

at least one processor-based management server communicatively coupled to receive

gathered status information **[Ballantine -- Figure 1, Col. 3 lines 60-64 and Col. 4 lines 47-49 –**

Monitoring sensors communicate the operational data back to health manager on

workstation or server, i.e. processor-based]; and

the at least one processor-based management server including at least one rule

[Ballantine -- Col. 2 lines 57-64, Col. 5 lines 5-19 and Col. 7 lines 2-5 – Software reads

general information entered into the system by the user and uses historical data to produce

policies or facts, i.e. rules, such as when a certain level is approaching a predetermined

threshold value] executing thereon that defines a condition for predicting a performance

problem within the network, wherein gathered status information is correlated with said at least

one rule to enable the processor-based management server to predict the occurrence of a

performance problem within the network **[Ballantine -- Col. 6 lines 5-11 and lines 35-38 --**

Information, gathered from planning, network management and maintenance scheduling

tools, i.e. are constantly used in monitoring, i.e. executing, to predict system health. In

addition, system predicts future component performance and when problems are likely to

occur].

Ballantine, however, fails to teach that the sensors reside on a polling gateway to gather the

status information.

Sime, however, teaches a system that uses a gateway to collect information about a particular

network **[Sime -- Col. 5 lines 62-67 -- Internet gateways gather and collect information for**

central server system].

Ballantine is concerned with gathering information on network resources for a management

system, as is Sime.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention

was made to incorporate using gateways to gather and collect information, as taught by Sime into

the management system of Ballantine, in order to further collect data and resource information at

various network points to ensure best usage of resources, notification of problems and more

efficient systems.

9.   Claims 16-19, 22 and 25-29 is rejected under 35 U.S.C. 103(a) as being unpatentable

over Ballantine et al. (U.S. 6,446,123) in view of Sime (U.S. 5,961,598), as applied to claim 15

above.

Regarding claim 16, Ballantine-Sime teach the invention substantially as claimed,

wherein said one or more network elements include a plurality of network elements distributed in

the network [**Ballantine -- Col. 3 lines 8-19 – Plurality of components compose the network**].

Regarding claim 17, Ballantine-Sime teach the invention substantially as claimed,

wherein said one or more network elements include a plurality of disparate network elements

[**Ballantine -- Col. 3 lines 8-19 – Disparate or different components make up the network,**

including switches, routers, bay stations, peripherals, etc...].

Regarding claim 18, Ballantine-Sime teach the invention substantially as claimed,

wherein said at least one polling gateway includes a plurality of distributed polling gateways

[**Sime -- Figure 1 and Col. 2 lines 32-33 – Plurality of gateways**].

Regarding claim 19, Ballantine-Sime teach the invention substantially as claimed,

wherein said plurality of distributed polling gateways include polling gateways that are each

operable to poll particular ones of disparate network elements [**Ballantine -- Col. 4 lines 47-53 –**

Sensors, located in gateway devices (as taught by Sime, shown above) poll different

components of the network to gather operational data].

Regarding claim 22, this is a system claim corresponding to the method claimed in claim

3. It has similar limitations; therefore, claim 22 is rejected under the same rationale.

Regarding claim 25, this is a system claim corresponding to the method claimed in claim 6. It has similar limitations; therefore, claim 25 is rejected under the same rationale.

Regarding claim 26, Ballantine-Sime teach the invention substantially as claimed, wherein the at least one rules defines statistical analysis of said status information that foreshadows the occurrence of a performance problem **[Ballantine -- Figures 4A, 4B, Col. 6 lines 35-38 and Col. 8 lines 9-10 and lines 26-31 – Graphs along with trends are used to analyze and predict future occurrence of problems, i.e. through past data, system can foresee certain threshold being met at a given date and time]**.

Regarding claim 27, Ballantine-Sime teach the invention substantially as claimed, wherein the at least one rule defines a known correlation of status information that foreshadows the occurrence of a performance problem **[Ballantine -- Col. 6 lines 25-34 – By monitoring operational conditions and performance trends, i.e. status information, the system learns through these tools what kinds of status reading and various elements lead to system problems, so in the future, it can more readily predict these possible problems]**.

Regarding claims 28 and 29, these are system claims corresponding to the method claimed in claims 7 and 8. They have similar limitations; therefore claims 28 and 29 are rejected under the same rationale.

10.   Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ballantine et a.

(U.S. 6,446,123) and Sime (U.S. 5,961,598), as applied to claim 19 above, in view of Chin et al.

(U.S. 6,456,306).

        Regarding claim 20, Ballantine-Sime teach the invention substantially as claimed, as

aforementioned in claim 19 above, but fails to explicitly teach disparate network communicate

using different protocols.

Chin, however, teaches a system for monitoring network devices for health information, wherein

the elements use different protocols, including TCP/IP and SNMP to communicate [**Chin -- Col.**

5 lines 53-55 and lines 59-62].

Both TCP/IP and SNMP are two of the most widely known and used protocols among networked

devices.

It would have been obvious to one of ordinary skill in the art at the time the invention was made

to incorporate monitoring of device health status among devices of different protocols, as taught

by Chin into the performance and overall health monitoring system of Ballantine-Sime, in order

to be able to monitor all devices, regardless of communication protocol from a single point to

ensure the health and performance of the network.

11.   Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ballantine et al.

(U.S. 6,446,123), Sime (U.S. 5,961,598) and Chin et al. (U.S. 6,456,306), as applied to claim 20

above.

Regarding claim 21, Ballantine-Sime-Chin teach the invention substantially as claimed, as aforementioned in claim 20 above, wherein said disparate network elements include network elements selected from the group consisting of: SNMP network elements, CMIP network elements, and network elements using TCP/IP protocol [**Chin -- Col. 5 lines 53-55 and lines 59-62 – Both TCP/IP and SNMP protocols are used by the various elements of the network system**].

12.   Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ballantine et al. (U.S. 6,446,123) and Sime (U.S. 5,961,598), as applied to claim 22 above.

Regarding claims 23 and 24, these are system claims corresponding to the methods claimed in claims 2 and 4. They have similar limitations; therefore claims 23 and 24 are rejected under the same rationale.

13.   Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ballantine et al. (U.S. 6,446,123) and Sime (U.S. 5,961,598).

Regarding claim 30, Ballantine teaches the invention substantially as claimed, a management system for managing one or more layers of a network [**Ballantine -- Col. 3 lines**

42-47 – Network management system, managing in one or more layers, i.e. element

management layer], wherein said managing includes predicting performance problems that are

likely to occur within one or more layers of the network **[Ballantine -- Col. 6 lines 5-11 and**

lines 35-38 – System predicts future component performance and when problems are likely

to occur] and taking responsive actions in an attempt to prevent or timely respond to predicted

performance problems **[Ballantine -- Col. 7 lines 55-60 – After recommending appropriate**

action, system initiates the action by either scheduling maintenance, ordering a necessary

part or contacting a maintenance technician or maintenance administrator, etc...], said

management system comprising:

at least one processor-based management server communicatively coupled to at least one

network element to gather status information for said at least one network element **[Ballantine --**

Figure 1, Col. 3 lines 60-64 and Col. 4 lines 47-49 – Monitoring sensors communicate the

operational data back to health manager on workstation or server, i.e. processor-based];

and

the at least one processor-based management server including software code executing thereon,

wherein said software code includes at least one rule **[Ballantine -- Col. 2 lines 57-64, Col. 5**

lines 5-19 and Col. 7 lines 2-5 – Software reads general information entered into the system

by the user and uses historical data to produce policies or facts, i.e. rules, such as when a

certain level is approaching a predetermined threshold value] that defines a known condition

for predicting a performance problem within the network, wherein gathered status information is

correlated with said at least one rule to enable the processor-based management server to predict

the occurrence of a performance problem within the network **[Ballantine -- Col. 6 lines 5-11**

and lines 35-38 – Information, gathered from planning, network management and

maintenance scheduling tools, i.e. are constantly used in monitoring, i.e. executing, to

predict system health. In addition, system predicts future component performance and

when problems are likely to occur].

Ballantine, however, fails to teach that the sensors reside on a polling gateway to gather the

status information.

Sime, however, teaches a system that uses a gateway to collect information about a particular

network **[Sime -- Col. 5 lines 62-67 – Internet gateways gather and collect information for**

central server system].

Ballantine is concerned with gathering information on network resources for a management

system, as is Sime.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention

was made to incorporate using gateways to gather and collect information, as taught by Sime into

the management system of Ballantine, in order to further collect data and resource information at

various network points to ensure best usage of resources, notification of problems and more

efficient systems.

14.   Claims 31-34, 37 and 40-44 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Ballantine et al. (U.S. 6,446,123) and Sime (U.S. 5,961,598), as applied to claim 30 above.

Regarding claims 31-34, these are system claims corresponding to the system claimed in claims 16-19. They have similar limitations; therefore, claims 31-34 are rejected under the same rationale.

Regarding claim 37, this is a system claim corresponding to the method claimed in claim 3. It has similar limitations; therefore, claim 37is rejected under the same rationale.

Regarding claim 40, this is a system claim corresponding to the method claimed in claim 6. It has similar limitations; therefore, claim 40 is rejected under the same rationale.

Regarding claims 41-44, these are system claims corresponding to the system claimed in claims 26-29. They have similar limitations; therefore, claims 41-44 are rejected under the same rationale.

15.   Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ballantine et al. (U.S. 6,446,123) and Sime (U.S. 5,961,598), as applied to claim 34 above.

Regarding claim 35, this is a system claim corresponding to the system claimed in claim 20. It has similar limitations; therefore, claim 35 is rejected under the same rationale.

16.   Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ballantine et al.

(U.S. 6,446,123) and Sime (U.S. 5,961,598), as applied to claim 35 above.

Regarding claim 36, this is a system claim corresponding to the system claimed in claim

21. It has similar limitations; therefore, claim 36 is rejected under the same rationale.

17.   Claim 38 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Ballantine et al. (U.S. 6,446,123) and Sime (U.S. 5,961,598), as applied to claim 37 above.

Regarding claims 38 and 39, these are system claims corresponding to the method

claimed in claims 2 and 4. They have similar limitations; therefore, claims 38 and 39 are

rejected under the same rationale.

18.   Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ballantine et al.

(U.S. 6,446,123) and Sime (U.S. 5,961,598), as applied to claim 30 above, in view of Barrack et

al. (U.S. 6,047,279).

Regarding claim 45, Ballantine-Sime teaches the invention substantially as claimed, as

aforementioned in claim 30 above, but fails to teach network elements are represented as an

object within object-oriented software, upon which objects have attributes which are gathered.

Barrack, however, teaches network elements represented as objects within object-oriented NMS

software further having attributes [Barrack -- Col. 1 lines 37-46 and Col. 5 lines 47-51].

It would have been obvious to one of ordinary skill in the art at the time the invention was made

to incorporate the object-oriented management software where devices are objects with

attributes, as taught by Barrack into the management system of Ballantine-Sime, in order to

provide a flexible and scalable system to monitor a wide range of elements efficiently.

19.   Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ballantine et al.

(U.S. 6,446,123), Sime (U.S. 5,961,598) and Barrack et al. (U.S. 6,047,279), as applied to claim

45 above.

Regarding claim 46, Ballantine-Sime-Barrack teach the invention substantially as

claimed, wherein said know conditions includes correlation of one or more attributes [Barrack --

Col. 5 lines 47-51 – Objects, i.e. devices have attributes which are specifics pertaining to the

device] of one or more objects to define the prediction of a performance problem [Ballantine --

Col. 6 lines 24-34 – System "learns from experience" and can modify and adapt policies

according to past and current monitored status information, i.e. Mother's Day produces a

heavy call volume and which hours are the highest, etc...].

20.   Claims 47-48, 50-51, 53-54, 55-56 and 57-58 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Ballantine et al. (U.S. 6,446,123) and Sime (U.S. 5,961,598), as applied

to claim 30 above, in view of Kulatunge et al. (U.S. 6,353,902).

        Regarding claims 47-48, 50-51, 53-54 and 55-56, Ballantine-Sime teach the invention

substantially as claimed, as aforementioned in claim 30 above, but fails to teach wherein said

management system includes a business management layer (claim 47), a service management

layer (claim 50), a network management layer (claim 53) and an element management layer

(claim 55) upon which a performance problem can occur in any of the layers.

Kulatunge, however, teaches a management system for proactively managing faults in any of the

layers in a telecommunications network consisting of the standard Telecommunications

Management Network (TMN) model layers – business management layer, service management

layer, network management layer and an element management layer **[Kulatunge -- Col. 1 lines**

57-63 and Col. 4 lines 35-37].

It would have been obvious to one of ordinary skill in the art at the time the invention was made

to incorporate the pro-active fault management prediction system for the management layers of

the TMN, as taught by Kulatunge into the invention of Ballantine-Sime, in order to achieve a

complete monitoring system with the ability to monitor and predict faults in multiple layers

which provides for decreased network downtime and an increase in customer satisfaction.

Regarding claim 57, Ballantine-Sime-Kulatunge teach the invention substantially as

claimed, wherein said management system includes a plurality of at least the following layers:

business management layer, service management layer, network management layer, and element

management layer [**Kulatunge -- Col. 1 lines 57-63 – System handles all levels of the TMN**],

and wherein a plurality of said layers are correlated within said at least one rule [**Kulatunge --**

Col. 3 lines 19-32 and Col. 7 lines 19-21 – Rules, i.e. log selections, can encompass any layer

because protection is provided for all layers. Therefore, users who select logs can create

rules, i.e. logs for more than one layer].

Regarding claim 58, Ballantine-Sime-Kulatunge teach the invention substantially as

claimed, wherein said management system includes a plurality of at least the following layers:

business management layer, service management layer, network management layer, and element

management layer, and wherein said performance problem is a problem within any of said

plurality of layers [**Kulatunge -- Col. 1 lines 57-63, Col. 3 lines 19-32 and Col. 7 lines 19-21 –**

Rules can be developed to predict performance problems in all layers of the system,

therefore, a problem can occur within any layer of the TMN system].

21.   Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ballantine et al.

(U.S. 6,446,123) and Sime (U.S. 5,961,598) and Kulatunge (U.S. 6,353,902), as applied to claim

48 above, in view of Quelene (US 2002/0038292).

Regarding claim 49, Ballantine-Sime-Kulatunge teach the invention substantially as

claimed, as aforementioned in claim 48 above, but fail to teach wherein one network element

includes an electronic commerce system for processing transactions over the Internet, wherein a

problem occurs resulting in inability to process transactions.

Quelene teaches this limitation, wherein an e-commerce system has a problem and is unable to

process a business transaction **[Quelene -- Page 9 paragraph [0134]]**.

Ballantine-Sime-Kulatunge teach a management system to predict future errors or failures in any

of the layers of the TMN. Quelene's e-commerce system incurs an error resulting in a

transaction not being able to be processed. It would have been obvious to one of ordinary skill in

the art at the time the invention was made to incorporate the business e-commerce system of

Quelene into the invention of Ballantine-Sime-Kulatunge in order to help predict and stop such

as errors as those incurred by Quelene which further leads to having decreased system down time

and increased revenue and customer satisfaction.

22.   Claims 52 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ballantine et al.

(U.S. 6,446,123) and Sime (U.S. 5,961,598), as applied to claim 30 above, in view of Kulatunge

et al. (U.S. 6,353,902).

Regarding claim 52, Ballantine-Sime-Kulatunge teach the invention substantially as

claimed, as aforementioned in claim 51 above, including wherein said service performance

problem includes problem with the quality provided to subscribers or clients of the managed

network [Ballantine -- Col. 7 lines 47-60 – Quality drops as customers begin to have their

calls blocked due to a lack of switches present in the system. This failure would cause the

quality of service provided the clients to drop and customer satisfaction to fall].

Conclusion

23.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

- Manghirmalani et al. (U.S. 5,819,028) discloses a method for monitoring the health

   status of various network components distributed throughout the network using

   agents which report back to the central management system.

- Hajji (U.S. 6,415,189) discloses a method for monitoring and predicting disk drive

   failure before they occur. The system also suggests corrective actions to be taken.

- Battat et al. (US 2003/0088663) discloses a method for using neural agents to monitor

   network status and devices and to predict future states of these devices.

- Garg et al. (U.S. 6,327,677) discloses a method for monitoring a network

   environment by polling devices and using established rules or policies to detect and

   predict potential problems.

- Bertram et al. (US 2002/0133757) discloses a system for monitoring and analyzing performance of a computer system and predicts possible future problems and corrective actions based upon current state.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas J. Mauro Jr. whose telephone number is 703-605-1234. The examiner can normally be reached on M-F 8:00a.m. - 4:30p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on 703-308-5221. The fax phone number for the organization where this application or proceeding is assigned is 703-746-7239.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

TJM
January 20, 2004

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